09/775938
STN Search Summary

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=> d his

     FILE 'CAPLUS' ENTERED AT 14:04:24 ON 12 FEB 2003
L1           625 S BRYOSTATIN? OR BRYOPYRAN?
L2             9 S L1 AND POLYKETIDE?
L3             6 S L1 AND BIOSYNTHES?
L4             7 S L2 NOT L3
L5             4 S L3 NOT L2
L6           137 S POLYKETIDE AND MARIN?
L7           140 S POLYKETIDE AND (MARINE? OR AQUA?)
L8            26 S (POLYKETIDE (2W) SYNTH?) AND (MARINE? OR AQUA?)
L9            23 S L8 NOT L2
L10           23 S L9 NOT L5
L11            1 S POLYKETIDE AND CANDIDATUS
L12            2 S POLYKETIDE AND ENDOBUGULA
L13            3 S POLYKETIDE AND BUGULA

L2   ANSWER 1 OF 9  CAPLUS  COPYRIGHT 2003 ACS
AN   2003:20492  CAPLUS
TI   A Concise, Selective Synthesis of the Polyketide Spacer Domain
     of a Potent Bryostatin Analogue
AU   Wender, Paul A.; Mayweg, Alexander V. W.; VanDeusen, Christopher L.
SO   Organic Letters (2003), 5(3), 277-279

L2   ANSWER 2 OF 9  CAPLUS  COPYRIGHT 2003 ACS
AN   2002:366741  CAPLUS
TI   Structural and stereochemical diversity from (.+-.)-2,2-dimethyl-8-
     oxabicyclo[3.2.1]oct-6-en-3-one - application to the synthesis of
     polyketide segments of natural products
AU   Vakalopoulos, Alexandros; Smits, Rene; Hoffmann, H. Martin R.
SO   European Journal of Organic Chemistry (2002), (9), 1538-1545

L2   ANSWER 3 OF 9  CAPLUS  COPYRIGHT 2003 ACS
AN   2001:761122  CAPLUS
TI   Evidence for the biosynthesis of bryostatins by the bacterial
     symbiont Candidatus Endobugula sertula of the bryozoan Bugula neritina
AU   Davidson, S. K.; Allen, S. W.; Lim, G. E.; Anderson, C. M.; Haygood, M. G.
SO   Applied and Environmental Microbiology (2001), 67(10), 4531-4537

L2   ANSWER 4 OF 9  CAPLUS  COPYRIGHT 2003 ACS
AN   2001:139776  CAPLUS
TI   Asymmetric Synthesis of the Northern Half C1-C16 of the
     Bryostatins
AU   Vakalopoulos, A.; Lampe, T. F. J.; Hoffmann, H. M. R.
SO   Organic Letters (2001), 3(6), 929-932
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L2 ANSWER 5 OF 9 CAPLUS COPYRIGHT 2003 ACS
AN 2001:115276 CAPLUS
TI Marine organism nucleic acids encoding enzymes for the biosynthesis of bryostatins, bryopyrans and polyketides
IN Haygood, Margo; Davidson, Seana K.; Allen, Scott W.; Hildebrand, Mark
PA Regents of the University of California, USA
SO PCT Int. Appl., 233 pp.

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001011024	A2	20010215	WO 2000-US21326	20000804
	EP 1212408	A2	20020612	EP 2000-953836	20000804
	US 2002081665	A1	20020627	US 2001-775938	20010131
PRAI	US 1999-147283P	P	19990804		
	WO 2000-US21326	W	20000804		

L2 ANSWER 6 OF 9 CAPLUS COPYRIGHT 2003 ACS
AN 2000:690122 CAPLUS
TI High stereochemical diversity and applications for the synthesis of marine natural products: a library of carbohydrate mimics and polyketide segments
AU Misske, Andrea M.; Hoffmann, H. Martin R.
SO Chemistry--A European Journal (2000), 6(18), 3313-3320

L2 ANSWER 7 OF 9 CAPLUS COPYRIGHT 2003 ACS
AN 2000:61710 CAPLUS
TI Synthesis highlights: a review of the literature for 1998
AU Quayle, Peter
SO Annual Reports on the Progress of Chemistry, Section B: Organic Chemistry (1999), 95, 235-263

L2 ANSWER 8 OF 9 CAPLUS COPYRIGHT 2003 ACS
AN 1996:711189 CAPLUS
TI In vitro biosynthetic studies of the bryostatins, anti-cancer agents from the marine bryozoan Bugula neritina
AU Kerr, Russell G.; Lawry, Joseph; Gush, Kim A.
SO Tetrahedron Letters (1996), 37(46), 8305-8308

L2 ANSWER 9 OF 9 CAPLUS COPYRIGHT 2003 ACS
AN 1989:213181 CAPLUS
TI Asymmetric synthesis and its applications: towards the synthesis of bryostatin 1
AU Masamune, Satoru
SO Pure and Applied Chemistry (1988), 60(11), 1587-96

L5 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2003 ACS
AN 2002:589776 CAPLUS
TI Drugs from the seas - current status and microbiological implications
AU Proksch, P.; Edrada, R. A.; Ebel, R.
SO Applied Microbiology and Biotechnology (2002), 59(2-3), 125-134

L5 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2003 ACS
AN 2002:132136 CAPLUS
TI Evolutionary biosynthesis of anticancer drugs
AU Pettit, George R.
SO ACS Symposium Series (2001), 796(Anticancer Agents), 16-42

L10 ANSWER 1 OF 23 CAPLUS COPYRIGHT 2003 ACS
AN 2002:859132 CAPLUS
TI A polyketide synthase-peptide synthetase gene cluster from an uncultured bacterial symbiont of Paederus beetles
AU Piel, Jorn
SO Proceedings of the National Academy of Sciences of the United States of America (2002), 99(22), 14002-14007

L10 ANSWER 2 OF 23 CAPLUS COPYRIGHT 2003 ACS
AN 2002:758540 CAPLUS
TI The barbamide biosynthetic gene cluster: a novel marine cyanobacterial system of mixed polyketide synthase (PKS)-non-ribosomal peptide synthetase (NRPS) origin involving an unusual trichloroleucyl starter unit
AU Chang, Zunxue; Flatt, Patricia; Gerwick, William H.; Nguyen, Viet-Anh; Willis, Christine L.; Sherman, David H.
SO Gene (2002), 296(1-2), 235-247

L10 ANSWER 3 OF 23 CAPLUS COPYRIGHT 2003 ACS
AN 2002:725385 CAPLUS
TI A Gene Cluster from a Marine Streptomyces Encoding the Biosynthesis of the Aromatic Spiroketal Polyketide Griseorhodin A
AU Li, Aiying; Piel, Jorn
SO Chemistry & Biology (2002), 9(9), 1017-1026

L10 ANSWER 4 OF 23 CAPLUS COPYRIGHT 2003 ACS
AN 2002:667674 CAPLUS
TI Polyunsaturated fatty acid synthesis: what will they think of next?
AU Wallis, James G.; Watts, Jennifer L.; Browse, John
SO Trends in Biochemical Sciences (2002), 27(9), 467-473

L10 ANSWER 5 OF 23 CAPLUS COPYRIGHT 2003 ACS
AN 2002:484361 CAPLUS
TI Structure and regulation of the omega-3 polyunsaturated fatty acid synthase genes from the deep-sea bacterium Photobacterium profundum strain SS9
AU Allen, Eric E.; Bartlett, Douglas H.
SO Microbiology (Reading, United Kingdom) (2002), 148(6), 1903-1913

L10 ANSWER 6 OF 23 CAPLUS COPYRIGHT 2003 ACS
AN 2002:471565 CAPLUS
TI Biosynthesis of polyunsaturated fatty acids by polyketide synthases
AU Kaulmann, Ursula; Hertweck, Christian
SO Angewandte Chemie, International Edition (2002), 41(11), 1866-1869

L10 ANSWER 7 OF 23 CAPLUS COPYRIGHT 2003 ACS
AN 2002:355992 CAPLUS
TI Genomic sequence and evolution of marine cyanophage P60: A new insight on lytic and lysogenic phages
AU Chen, Feng; Lu, Jingrang
SO Applied and Environmental Microbiology (2002), 68(5), 2589-2594

L10 ANSWER 9 OF 23 CAPLUS COPYRIGHT 2003 ACS
AN 2002:198784 CAPLUS
TI Plumbing the depths of PUFA biosynthesis: a novel polyketide synthase-like pathway from marine organisms
AU Napier, Johnathan A.
SO Trends in Plant Science (2002), 7(2), 51-54

L10 ANSWER 10 OF 23 CAPLUS COPYRIGHT 2003 ACS
AN 2001:925484 CAPLUS
TI Synthesis of C13-C22 fragment of the marine sponge polyketide callystatin A
AU Dias, Luiz C.; Meira, Paulo R. R.
SO Tetrahedron Letters (2002), 43(2), 185-187

L10 ANSWER 12 OF 23 CAPLUS COPYRIGHT 2003 ACS
AN 2001:634532 CAPLUS
TI Nucleotide sequence and predicted functions of the entire Sinorhizobium meliloti pSymA megaplasmid
AU Barnett, Melanie J.; Fisher, Robert F.; Jones, Ted; Komp, Caridad; Abola, A. Pia; Barloy-Hubler, Frederique; Bowser, Leah; Capela, Delphine; Galibert, Francis; Gouzy, Jerome; Gurjal, Mani; Hong, Andrea; Huizar, Lucas; Hyman, Richard W.; Kahn, Daniel; Kahn, Michael L.; Kalman, Sue; Keating, David H.; Palm, Curtis; Peck, Melicent C.; Surzycki, Raymond; Wells, Derek H.; Yeh, Kuo-Chen; Davis, Ronald W.; Federspiel, Nancy A.; Long, Sharon R.
SO Proceedings of the National Academy of Sciences of the United States of America (2001), 98(17), 9883-9888

L10 ANSWER 13 OF 23 CAPLUS COPYRIGHT 2003 ACS
AN 2001:528511 CAPLUS
TI Production of polyunsaturated fatty acids by polyketide synthases in both prokaryotes and eukaryotes
AU Metz, James G.; Roessler, Paul; Facciotti, Daniel; Levering, Charlene; Dittrich, Franziska; Lassner, Michael; Valentine, Ray; Lardizabal, Kathryn; Domergue, Frederic; Yamada, Akiko; Yazawa, Kazunaga; Knauf, Vic; Browse, John
SO Science (Washington, DC, United States) (2001), 293(5528), 290-293

L10 ANSWER 14 OF 23 CAPLUS COPYRIGHT 2003 ACS
AN 2001:51336 CAPLUS
TI Cloning, sequencing and analysis of the enterocin biosynthesis gene cluster from the marine isolate "Streptomyces maritimus": evidence for the derailment of an aromatic polyketide synthase
AU Piel, Jorn; Hertweck, Christian; Shipley, Paul R.; Hunt, Deanna M.; Newman, Mark S.; Moore, Bradley S.
SO Chemistry & Biology (2000), 7(12), 943-955

L10 ANSWER 15 OF 23 CAPLUS COPYRIGHT 2003 ACS
AN 2000:895549 CAPLUS
TI A plant-like biosynthesis of benzoyl-CoA in the marine bacterium 'Streptomyces maritimus'
AU Hertweck, C.; Moore, B. S.
SO Tetrahedron (2000), 56(46), 9115-9120

L10 ANSWER 16 OF 23 CAPLUS COPYRIGHT 2003 ACS
AN 2000:493686 CAPLUS
TI Schizochytrium polyketide synthase genes and transgenic plants for polyunsaturated long chain fatty acid production
IN Facciotti, Daniel; Metz, James George; Lassner, Michael
PA Calgene, LLC, USA
SO PCT Int. Appl., 303 pp.

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000042195	A2	20000720	WO 2000-US956	20000114
	WO 2000042195	A3	20000928		
	EP 1147197	A2	20011024	EP 2000-904357	20000114
	BR 2000008760	A	20021008	BR 2000-8760	20000114
	JP 2002534123	T2	20021015	JP 2000-593752	20000114
PRAI	US 1999-231899	A	19990114		
	WO 2000-US956	W	20000114		

L10 ANSWER 20 OF 23 CAPLUS COPYRIGHT 2003 ACS
AN 1998:806788 CAPLUS
TI Polyketide synthesis genes of marine microbes and production of polyunsaturated fatty acids and PUFA-containing plant oils with transgenic plants
IN Facciotti, Daniel; Metz, James George; Lassner, Michael
PA Calgene, LLC, USA
SO PCT Int. Appl., 153 pp.

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9855625	A1	19981210	WO 1998-US11639	19980604
	EP 1003869	A1	20000531	EP 1998-925264	19980604
	BR 9809946	A	20000801	BR 1998-9946	19980604
	US 6140486	A	20001031	US 1998-90793	19980604
	JP 2002510205	T2	20020402	JP 1999-502926	19980604
PRAI	US 1997-48650P	P	19970604		
	WO 1998-US11639	W	19980604		

L13 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2003 ACS
AN 1996:711189 CAPLUS
TI In vitro biosynthetic studies of the bryostatins, anti-cancer agents from the marine bryozoan Bugula neritina
AU Kerr, Russell G.; Lawry, Joseph; Gush, Kim A.
CS Dep. Chem. Biochem., Florida Atlantic Univ., Boca Raton, FL, 33431, USA
SO Tetrahedron Letters (1996), 37(46), 8305-8308

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  AUTHORS   Bouma,C.L. and Roseman,S.
  TITLE     Sugar transport by the marine chitinolytic bacterium Vibrio
            furnissii. Molecular cloning and analysis of the mannose/glucose
            permease
  JOURNAL   J. Biol. Chem. 271 (52), 33468-33475 (1996)
  MEDLINE   97125988
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  AUTHORS   Bouma,C.L. and Roseman,S.
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Revised: July 5, 2002.

Feb 4 2003 11:22:44

☐1: P96166. N-ACETYLGLUCOSAMI...[gi:3122428]

BLink, Domains, Links

```
LOCUS       NAGA_VIBFU               399 aa            linear   BCT 15-JUL-1998
DEFINITION  N-ACETYLGLUCOSAMINE-6-PHOSPHATE DEACETYLASE (GLCNAC 6-P
            DEACETYLASE).
ACCESSION   P96166
VERSION     P96166  GI:3122428
DBSOURCE    swissprot: locus NAGA_VIBFU, accession P96166;
            class: standard.
            created: Jul 15, 1998.
            sequence updated: Jul 15, 1998.
            annotation updated: Jul 15, 1998.
            xrefs: gi: 1732198, gi: 1732203
KEYWORDS    Hydrolase; Carbohydrate metabolism.
SOURCE      Vibrio furnissii
  ORGANISM  Vibrio furnissii
            Bacteria; Proteobacteria; Gammaproteobacteria; Vibrionales;
            Vibrionaceae; Vibrio.
REFERENCE   1  (residues 1 to 399)
  AUTHORS   Bouma,C.L. and Roseman,S.
  TITLE     Sugar transport by the marine chitinolytic bacterium Vibrio
            furnissii. Molecular cloning and analysis of the mannose/glucose
            permease
  JOURNAL   J. Biol. Chem. 271 (52), 33468-33475 (1996)
  MEDLINE   97125988
   PUBMED   8969210
  REMARK    SEQUENCE FROM N.A.
            STRAIN=SR1514
COMMENT     ---------------------------------------------------------------
            This SWISS-PROT entry is copyright. It is produced through a
            collaboration between the Swiss Institute of Bioinformatics and
            the EMBL outstation - the European Bioinformatics Institute.
            The original entry is available from http://www.expasy.ch/sprot
            and http://www.ebi.ac.uk/sprot
            ---------------------------------------------------------------.
            [CATALYTIC ACTIVITY] N-ACETYL-D-GLUCOSAMINE 6-PHOSPHATE + H(2)O =
            D-GLUCOSAMINE 6-PHOSPHATE + ACETATE.
            [PATHWAY] N-ACETYL GLUCOSAMINE UTILIZATION PATHWAY.
            [SIMILARITY] BELONGS TO THE NAGA FAMILY.
FEATURES             Location/Qualifiers
     source          1..399
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                     /db_xref="taxon:29494"
     gene            1..399
                     /gene="MAND"
     Protein         1..399
                     /gene="MAND"
                     /product="N-ACETYLGLUCOSAMINE-6-PHOSPHATE DEACETYLASE"
                     /EC_number="3.5.1.25"
ORIGIN
        1 meskshahcf raqrvlhgkq wqqdavvtvd engtisaies ydgqrhadai plgpvdlmpg
       61 lidshvhgsq gcdvmdathd slntmsryfa tlgvtafvat tvtapvakir aalaqvaksk
      121 hdgvdgaeil gaylegpyft eknkgahptq wfrelaveel edwisysdnq llkvalapek
      181 tgaldairyl dahgihvmlg hsdadyeqvk aalaagakgi vhcyngmrgl hhrdpgvvga
```

```
241 gllhphcfve miadghhvhp aaidvahrcc gsrmtlitda mratgmpdgq ytlgeyqvdm
301 kqgvvmtssg glagstltll rgvknihrwl nvpieqawlm asytpaeslg iqhqlgslev
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//
```

Revised: August 5, 2002.

[LinkDB]

ENTRY EC 3.5.1.25
NAME N-acetylglucosamine-6-phosphate deacetylase
acetylglucosamine phosphate deacetylase
acetylaminodeoxyglucosephosphate acetylhydrolase
2-acetamido-2-deoxy-D-glucose-6-phosphate amidohydrolase
CLASS Hydrolases
Acting on carbon-nitrogen bonds, other than peptide bonds
In linear amides
SYSNAME N-acetyl-D-glucosamine-6-phosphate amidohydrolase
REACTION N-acetyl-D-glucosamine 6-phosphate + H2O =
D-glucosamine 6-phosphate + acetate
SUBSTRATE H2O
N-acetyl-D-glucosamine 6-phosphate
PRODUCT acetate
D-glucosamine 6-phosphate
REFERENCE 1 [UI:68041342]
White, R.J. and Pasternak, C.A. The purification and properties of N-acetylglucosamine 6-phosphate deacetylase from Escherichia coli. Biochem. J. 105 (1967) 121-125.
2 [UI:97141207]
Yamano, N., Matsushita, Y., Kamada, Y., Fujishima, S., Arita, M. Purification and characterization of N-acetylglucosamine 6-phosphate deacetylase with activity against N-acetylglucosamine from Vibrio cholerae non-O1. Biosci. Biotechnol. Biochem. 60 (1996) 1320-1323.
PATHWAY PATH: MAP00530 Aminosugars metabolism
GENES DME: CG17065
CEL: F59B2.3
ECO: b0677(nagA) b3135(agaA)
ECJ: JW0663(nagA) JW3104(agaA)
ECE: Z0824(nagA) Z4489
ECS: ECs0707 ECs4015
ECC: c0752(nagA)
STY: STY0721(nagA)
STM: STM0683(nagA)
YPE: YPO0838 YPO2626(nagA)
YPK: y1201(nagA) y3223
SFL: SF0616(nagA)
HIN: HI0140(nagA)
PMU: PM0874(nagA)
XFA: XF1465
XCC: XCC3410(nagA)
XAC: XAC0715(nagA)
VCH: VC0994 VC1783
PAE: PA3758
SON: SO3505(nagA)
MLO: mll4766
SME: SMc02878(nagA)
ATU: Atu2608(nagA)
ATC: AGR_C_4726
BME: BMEII0385
BMS: BRA0911(nagA)
CCR: CC0443 CC0534
BSU: BG12630(nagA)
BHA: BH0421(nagA)
OIH: OB2907(nagA)
SAU: SA0656(nagA)
SAV: SAV0701(nagA)
SAM: MW0663(nagA)
LMO: lmo0956 lmo2108
LIN: lin0955 lin2213
LLA: L173068(nagA)

SPY: SPy1694(nagA)
SPM: spyM18_1705(nagA)
SPG: SpyM3_1475(nagA)
SPN: SP2056
SPR: spr1867(nagA)
SAG: SAG0266(nagA)
SAN: gbs0256
SMU: SMU.435
CAC: CAC0188(nagA)
CPE: CPE2176(nagA)
TTE: TTE0232(nagA)
MPU: MYPU_3690(nagA)
MPE: MYPE1750(nagA)
MTU: Rv3332(nagA)
MTC: MT3435
CGL: NCgl2556(Cgl2645)
SCO: SCO4284(SCD95A.17c)
BLO: BL1344(nagA)
FNU: FN1133
BBU: BB0151(nagA)
TEL: tll2093
ANA: all0988
DRA: DRA0066
TMA: TM0814
SSO: SSO2673(nagA)
STO: ST2546

STRUCTURES PDB: 1O12

DBLINKS IUBMB Enzyme Nomenclature: 3.5.1.25
ExPASy - ENZYME nomenclature database: 3.5.1.25
WIT (What Is There) Metabolic Reconstruction: 3.5.1.25
BRENDA, the Enzyme Database: 3.5.1.25
CAS: 9027-50-3

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